

Australian Standard™

**Breath alcohol testing devices  
for personal use**

This Australian Standard was prepared by Committee CS/77, Blood Alcohol Testing Devices. It was approved on behalf of the Council of Standards Australia on 31 December 1996 and published on 5 March 1997.

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The following interests are represented on Committee CS/77:

Australian Association of Certification Bodies  
Australian Automobile Association  
Australian Chamber of Commerce and Industry  
Australian Chamber of Manufactures  
Central Queensland University  
Department of Transport S.A.  
N.S.W. Police Service  
Police Department of South Australia  
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**Breath alcohol testing devices  
for personal use**

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## PREFACE

This Standard was prepared by Standards Australia Committee CS/77, Blood Alcohol Testing Devices, to supersede AS 3547—1993.

*This Standard incorporates Amendment No. 1 (June 2000). The changes required by the Amendment(s) are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure, or part thereof affected.*

While the performance criteria for the breath alcohol testing devices specified within remain largely unchanged in this edition, the test requirements for these devices have been clarified and more closely aligned. Other changes to the Standard include—

- (i) an alignment of the minimum calibration periods and display requirements for Type 2, Type 3 and Type 4 devices;
- (ii) replacement of the vibration and dust exposure tests for Type 2 devices with a simple robustness test; and
- (iii) removal of requirements for analogue displays, due to the increasing obsolescence of devices incorporating such displays.

The Committee was aware that recalibration of electronic breath alcohol testing devices at regular intervals is vital if accurate results are to be obtained. Provision of recalibration facilities to the general public at a reasonable price, should, in the opinion of the Committee, be a prerequisite for the sale of electronic breath alcohol devices for personal use. Obviously, such a requirement could not be included in an Australian Standard product specification, and it is therefore only included as a recommendation for consideration by the appropriate regulatory authorities and by the suppliers of these devices.

Requirements specified in Section 5 for breath alcohol testing devices such as those which are fitted to motor vehicles or machinery relate only to the performance and accuracy of these devices in measuring the alcohol content of expired air and in providing an appropriate output signal to the circuitry which interacts with the vehicle or machine. Requirements are not included for systems which are designed to ensure that only the driver's or operator's breath is measured and no other source of air is introduced into the device. The means by which these devices interact with motor vehicles or machinery to inhibit their use are also not specified. In both instances these functions were considered to be beyond the scope of this Standard.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

## CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE .....	4
1.2 OBJECTIVE .....	4
1.3 CLASSIFICATION .....	4
1.4 REFERENCED DOCUMENTS .....	4
1.5 DEFINITIONS .....	4
SECTION 2 TYPE 1 DEVICES	
2.1 SCOPE .....	6
2.2 PERFORMANCE REQUIREMENTS .....	6
2.3 TESTING .....	6
2.4 INFORMATION AND MARKING .....	6
SECTION 3 TYPE 2 DEVICES	
3.1 SCOPE .....	8
3.2 PERFORMANCE REQUIREMENTS .....	8
3.3 TESTING .....	9
3.4 INFORMATION AND MARKING .....	11
SECTION 4 TYPE 3 DEVICES	
4.1 SCOPE .....	12
4.2 PERFORMANCE REQUIREMENTS .....	12
4.3 TESTING .....	13
4.4 INFORMATION AND MARKING .....	14
SECTION 5 TYPE 4 DEVICES	
5.1 SCOPE .....	15
5.2 PERFORMANCE REQUIREMENTS .....	15
5.3 TESTING .....	16
5.4 INFORMATION AND MARKING .....	17
APPENDICES	
A TEST METHOD FOR BREATH ALCOHOL TESTING DEVICES USING SIMULATED EXPIRED AIR .....	19
B TEST METHOD FOR QUALITATIVE TYPE 2 DEVICES .....	22
C TEST METHOD FOR QUANTITATIVE TYPE 2 DEVICES .....	24
D TEST METHOD FOR TYPE 3 DEVICES .....	27
E TEST METHOD FOR TYPE 4 DEVICES .....	30

## STANDARDS AUSTRALIA

## Australian Standard

## Breath alcohol testing devices for personal use

## SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE** This Standard specifies requirements for the performance, testing and marking of disposable and re-useable breath alcohol testing devices for personal use, other than those devices used by the Police to obtain evidence which is used in the prosecution of drink-drivers.

**1.2 OBJECTIVE** The objective of this Standard is to provide manufacturers of breath alcohol testing devices for personal use with a set of minimum performance requirements, in order to enable users to determine their blood alcohol levels.

**1.3 CLASSIFICATION** Devices specified in this Standard are classified as follows:

- (a) *Type 1* Single-use, disposable breath alcohol testing devices.
- (b) *Type 2* Portable electronic breath alcohol testing devices (sometimes known as hand-held devices).
- (c) *Type 3* Electronic breath alcohol testing devices designed for use in fixed installations.
- (d) *Type 4* Electronic breath alcohol testing devices such as those which are installed to control the usage of motor vehicles or other machinery (sometimes known as interlock devices).

**1.4 REFERENCED DOCUMENTS** The following documents are referred to in this Standard:

## AS

	1099	Basic environmental testing procedures for electrotechnology
A1	1099.2.31	Method 2.31: Test Ec—Drop and topple, primarily for equipment
	3100	Approval and test specification—General requirements for electrical equipment

## AS/NZS

2596 Seat belt assemblies for motor vehicles

## A1 IEC

	60068	Environmental testing
	60068-2-6	Part 2: Tests—Test Fc: Vibration (sinusoidal)

**1.5 DEFINITIONS** For the purpose of this Standard, the definitions below apply.

**1.5.1 Alcohol**—the unmodified term ‘alcohol’ refers specifically to the chemical substance ethanol which, in the context of this Standard, may occur in either a liquid or gaseous form.

NOTE: Ethanol is also commonly known as ethyl alcohol.

**1.5.2 Automatic gas sampling system**—a process incorporated into a breath alcohol testing device by which the device determines automatically when an appropriate amount of sample has been delivered for analysis.

**1.5.3 Blood alcohol concentration (BAC)**—the concentration of alcohol in the bloodstream expressed in grams of alcohol per 100 mL of blood.

NOTE: Grams of alcohol per 100 mL of blood is commonly referred to as ‘percent’.



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